

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed April 19, 2006. At the time of the Office Action, Claims 1-15, 17-24 and 34-39 were pending in this Application. Claims 1-15, 17-24 and 34-39 were rejected. Claim 1 has been amended to further define various features of Applicants' invention. Claims 16 and 25-33 were previously cancelled without prejudice or disclaimer. Claim 2 has been cancelled by this response. Applicants respectfully request reconsideration and favorable action in this case.

Claim Objections

Claim 11 was objected to because of informalities. Applicants amended Claim 11 to overcome this objection and respectfully request full allowance of Claim 11 as amended.

Rejections under 35 U.S.C. § 102

Claims 1, 2, 7-11, 15, 17-18, 22-24 and 34-39 stand rejected by the Examiner under 35 U.S.C. §102(b) as being clearly anticipated by U.S. Patent 4,794,534 issued to Keith K. Millheim ("Millheim"). Applicants respectfully traverse and submit the cited art does not teach all of the elements of the claimed embodiment of the invention.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "the identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co. Ltd.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Applicants respectfully submit that the art cited as anticipatory by the Examiner cannot anticipate the rejected Claims, because the cited art does not show all the elements of the present Claims.

In Millheim, drilling apparatus are not selected based on the comparison of multiple simulations. Instead, Millheim waits until "drilling is not proceeding as planned" on a drilling plan, and then simulates changes in parameters to see if these new parameters "results appear acceptable." (Col. 4, lines 36-42). Parameters are changed if the results are not

acceptable. (Fig. 2A and 2B). The resulting selection is not based on the comparison of two simulated drilling performances to see which was better, but instead is a selection based on whether a given drilling plan will meet a particular specification.

These two processes are thus quite different. For example, the Millheim process of drilling a well may find that a particular drilling plan is meeting a particular specification based on real-time feedback of drilling data. However, it cannot be used prospectively to determine which of two drilling plans - which may both meet a minimum specification - will actually be better. Millheim's method does not consider the possibility that there may be even better alternatives that will yield results far beyond "acceptable."

Applicants respectfully submit that Millheim does not show or teach Applicants' invention as further defined in Claims 15 and 34. Applicants request withdrawal of all rejections and allowance of Claims 15 and 34 as previously amended.

Claim 1, as amended, is a method for "... selecting recommended drilling equipment ... comparing the predicted drilling performance ... based on the comparison," Millheim teaches using an engineering simulator to "finalize drilling plan" as shown in FIGURE 2A of Millheim. Among other steps of Applicants' invention as defined in amended Claim 1, Millheim does not show or teach "generating a geology model ... including a geology characteristic of the given formation per unit depth" Millheim does not show or teach various steps of Applicants' invention as further defined in amended Claim 1 including, but not limited to, "... determining a predicted drilling performance ... wherein the specification data of the proposed drilling equipment is a function of the geology characteristic" Applicants respectfully request withdrawal of all rejections and allowance of Claim 1 as amended.

Claims 3-9 are dependent directly or indirectly from Claim 1. Since Claim 1 as amended is now deemed allowable, Claims 3-9 are allowable. Applicants request withdrawal of all rejections and allowance of Claims 3-9 as previously amended.

Claim 10 as amended expressly calls for "A program product for predicting the performance of a drilling system" including, but not limited to, "... computer instructions ... operable to cause a computer to ... generate a geology model of a given formation ... determine a predicted drilling performance for a first proposed drilling

equipment . . . determine a predicting drilling performance for a second proposed drilling equipment . . . compare the predicted drilling performance for the first proposed drilling equipment with the predicted drilling performance for the second proposed drilling equipment.” Applicants respectfully submits that none of the references cited by the Examiner show or teach a program product operable to carry out the various operations as defined in amended Claim 10. Applicants request withdrawal of all rejections and allowance of Claim 10 as amended.

Claim 11 as amended defines further aspects of Applicants’ invention including, but not limited to, “. . . the computer instructions operable to cause the computer, based on the comparison, to select a recommended drilling equipment for use in the drilling system.” Applicants respectfully submit that Millheim does not show or teach comparing predicted drilling performance as defined in amended Claim 10 and selecting a recommended drilling equipment as further stated in amended Claim 11.

Claims 11-14 are dependent directly or indirectly from Claim 10. Since Claim 10 as amended is now deemed allowable, Claims 11-14 are allowable as amended. Applicants request withdrawal of all rejections and allowance of Claims 11-14 as amended.

Claim 15 is a method of “selecting drilling equipment” based on a comparison of “predicted performance of the first drilling equipment to predicted performance of the second drilling equipment”.

Claim 34 is a system for selecting drilling equipment with “means for comparing the predicted drilling mechanics data for the proposed drilling equipment to the geological model such that an optimized drilling system is selected.”

Rejections under 35 U.S.C. §103

Claims 3-6, 12-14 and 19-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Millheim. Applicants respectfully traverse and submit that Claims 3-6, 12-14 and 19-21 depend from claims that have now been placed in condition for allowance, thereby obviating the present rejections. Applicants request reconsideration, withdrawal of the rejections under §103 and full allowance of 3-6, 12-14 and 19-21 as amended. Applicants

do not release or waive their right to contest issues of obviousness previously presented by the Examiner.


CONCLUSION

Applicants have now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicants respectfully request reconsideration of the amended Claims.

Applicants believe there are no fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2599.

Respectfully submitted,
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